AMENDED CLAIMS

[Received by the International Bureau on 16 May 2005 (16.05.05): original claims 1 – 29 replaced by amended claims 1 - 21 (3 pages)]

1 The use of a peptide comprising all or an immunogenic part of the amino acid sequence designated SEQ ID NO 6 in the manufacture of a vaccine to stimulate an anti-cancer immune response against COA-1 (SEQ ID NO 2), wherein the immunogenic part of the sequence is processed and expressed by antigen presenting cells in association with sympathetic MHC class II molecules.

2 Use according to claim 1, wherein the immunogenic part of the sequence comprises 8 or more contiguous amino acid residues of SEQ ID NO 6.

3 Use according to claim 2, wherein the immunogenic part of the sequence comprises 10 or more contiguous amino acid residues of SEQ ID NO 6.

4 Use according to any preceding claim, wherein the immunogenic part of the sequence comprises SEQ ID NO. 9 at the N-terminus and/or SEQ ID NO. 10 at the C-terminus.

5 Use according to claim 1,wherein the immunogenic part of the sequence consists of SEQ ID NO 6.

6 Use according to any preceding claim, wherein the immune response is stimulated against Colorectal Cancer cells.

7 Use according to any preceding claim, wherein the peptide is an oligopeptide.

8 Use according to claim 1, wherein the MHC class II molecules are the HLA DRβ1*0402 and/or HLA DRβ1*1301 alleles.

9 Use according to any preceding claim, wherein the vaccine further comprises PBMC's (Peripheral Blood Mononuclear Cells) either expressing the HLA DRβ1*0402 and/or the HLA DRβ1*1301 alleles.

10 Use according to any of claim 1-8, wherein the vaccine further comprises Dendritic Cells, pulsed with a peptide comprising all or an immunogenic part of the amino acid sequence designated SEQ ID NO 6 or transfected with polynucleotides encoding said peptide, the Dendritic cells either expressing the HLA DRβ1*0402 and/or the HLA DRβ1*1301 alleles.

11 A vaccine comprising a peptide, as defined in any preceding claim.

12 A vaccine according to claim 11 comprising a suitable carrier.

13 A vaccine according to any of claims 11-12, comprising the peptide and PBMC's expressing a sympathetic MHC Class II allele therefor.

14 A vaccine according to claim 13, wherein the MHC Class II allele is the HLA DRβ1*0402 and/or the HLA DRβ1*1301 allele.

15 A method for stimulating immunity against colorectal cancer, comprising stimulating the production of antibodies against a peptide, as defined in any of claims 1-12.

16. A method according to claim 15, wherein immunity is stimulated in the patient in conjunction with PBMC's allogeneic or autologous for at least one sympathetic HLA-II allele capable of presenting all or an immunogenic part of the amino acid sequence designated SEQ ID NO 6 in an immunogenic manner.

17. A method according to claim 16, wherein the allele is selected from HLA DRβ1*0402 and HLA DRβ1*1301.

18. A method according to any of claims 15-17, wherein the patient has PBMC's autologous or allogeneic for at least one sympathetic HLA-II allele capable of presenting the COA-1 epitope in an immunogenic manner, the method comprising administering a vaccine comprising the immunising portion of COA-1, or a precursor therefor, as defined in any preceding claim, to the patient.

19. A method for stimulating immunity to colorectal cancer in a patient, said method comprising

i) isolating PBMC's or their progenitors from the patient and transforming said cells with at least one sympathetic HLA-II allele capable of presenting the COA-1 epitope in an immunogenic manner,

ii) introducing the transformed PBMC's back into the patient, and

iii) administering a vaccine comprising the immunising portion of COA-1, or a precursor therefor, as defined in any of claims 1 to 12, to the patient.

20. A method according to claim 19, wherein the immunising portion of COA-1, or a precursor therefor, is administered with the transformed PBMC's.

21 Use according to any of claims 1-4, wherein the immune response is stimulated against melanoma cells.